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TITLE : SILVER SOLDER MATERIAL

ABSTRACT : PURPOSE: To improve the surface state after soldering without damaging the basic capacity as a solder material, by adding small quantities of Si, Pb, Mg, etc. to an Ag-Cu alloy and adding Ge, Mn, Ni, etc. to it furthermore.

CONSTITUTION: 0.05~0.5% one or more out of Si, Pb, and Mg are added to the Ag-Cu alloy consisting of 50~95% Ag and 5~50% Cu, and further, 0.005~1% one or more of Ge, Mn, and Ni are added to this Ag-Cu alloy, thus obtaining a silver solder. Si, Pb, and Mg are metal elements easy to combine with oxygen and deoxidize the silver solder in the course of production and use of the silver solder and prevent the soldering surface from being rough by gas discharge when the silver solder is solidified. Ge, Mn, and Ni make the metallic organization minute for solidification of the silver solder to make the surface smooth. The soldering strength of this silver solder is approximately equivalent to that of the conventional soldering material in respect to the basic capacity, and the spread area is reduced slightly but it is not a problem in the practical use.

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